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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,422	03/02/2004	David A. Trueba	10437.0074.NPUS01	2421
23369	7590	11/01/2006	EXAMINER	
HOWREY LLP			OH, TAYLOR V	
C/O IP DOCKETING DEPARTMENT			ART UNIT	
2941 FAIRVIEW PARK DRIVE, SUITE 200			PAPER NUMBER	
FALLS CHURCH, VA 22042-7195			1625	

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/708,422

Applicant(s)

TRUEBA ET AL.

Examiner

Taylor Victor Oh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 7-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/2/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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Final Rejection

The Status of Claims

Claims 1-6 are pending.

Claims 1-6 are rejected.

Claims 7-18 are withdrawn.

Specification

The objection of disclosure is withdrawn due to the modification of the specification in the amendment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The rejection of Claims 1-6 under 35 U.S.C. 103(a) as being unpatentable over Miura et al (US 5,625,095).

The rejection of Claims 1-6 under 35 U.S.C. 103(a) as being unpatentable over Miura et al (US 5,625,095) has been maintained with the reasons of record on 5/2/06.

Applicants' Argument

Applicants argue the following issues:

- a. Mira does not teach or suggest measuring the density of the overhead the extract and the raffinate and adjusting at least one process variable associated with the distillation apparatus or the extraction step in response to the measured density or a relative concentration calculated as recited in claims.

Applicants' arguments have been noted, but the arguments are not persuasive.

First, regarding the applicants' argument, the Examiner has noted applicants' arguments. However, concerning unspecified measurement of the density of the overhead, the prior art teaches indirectly the concentration of various compositions in the overhead 20

withdrawn from the methyl iodide—acetic acid splitter column 14 contains methyl iodide of 5 to 90 weight %, acetaldehyde of 0.05 to 50 weight %, methyl acetate of 0 to 15 weight %, acetic acid of 0 to 80 weight %, moisture of 0.1 to 40 weight %, and other carbonyl impurities. (see col. 9, lines,

1-6). In addition, it is well-known fact in the art that the density (m/v) is directly related to the concentration (m/ V). Therefore, it would have been obvious to the skilled artisan in the art to be motivated to monitor the density of the various components of the

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overhead in order to maximize the efficiency of the process since the density (m/v) is directly proportional to the concentration (m/ V).

Regarding the adjustment of heating rate, the reference does teach the condition of the overhead at a temperature of 55° C or higher (see col. 8 ,lines 22-26) at which the separation of acetaldehyde and methyl iodide can be conducted by distilling the mixed liquid containing acetaldehyde and methyl iodide; also, controlling the operation pressure and the operation temperature in a distillation column has made it possible to separate and remove acetaldehyde (see col. 9 ,lines 46-50). From these teachings, it is quite possible to the skilled artisan in the art to be motivated to adjust the heating rate in order to make the separation process of acetaldehyde and methyl iodide more efficient.

With respect to the adjustment of the water feed rate to the extraction, the prior art does mention that the extraction is carried out at a temperature of 0 to 100° C for 1 second to 1 hour (see col . 7 , lines 57-58); it also recommends to use every suitable apparatus known in terms of technique and cost (see col. 7 ,lines 60-63). Furthermore, Table 1 shows the % of the water composition in the extraction material (see col. 13 ,line 34) as shown below (see col. 13 ,line 34) :

TABLE 1

	Composition (weight %)				
	Extraction material	Extract	Raffinate	Distillate	Bottom liquid
Methyl iodide	68.3	1.0	97.0	4.2	0
Formic acid	0	0	0	0	0.2
Water	0.7	76.8	0.2	2.4	99.8
Acetaldehyde	29.0	21.8	0.8	91.4	0
Paraldehyde	0.1	0	0.1	0	0
Alkanes	1.0	0	1.5	0	0
Others	0.9	0.5	0.4	2.0	0

Therefore, it would be obvious to the skilled artisan in the art to figure out how to adjust the water feed rate to the extraction. Thus, the prior art is still relevant to the issues of the claimed invention.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas McKenzie can be reached on 571-272-0670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Taylor Victor Oh, MSD, LAC
Primary Examiner
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lv/29106